



ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Mark scheme

June 2003

GCE

Information and Communication Technology

Unit ICT1

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GENERAL GUIDANCE NOTES FOR EXAMINERS

Overall guidelines

1. All examples accepted should be clearly related to the subject area and should not be “generalised” examples.
2. Attention should be paid to ensure that marks are not awarded for simple restating of the question or the stem, often involving the exact same terms.
3. The answers should be providing evidence of more than “man in the streets” knowledge of ICT.
4. It should be remembered that scripts could be seen after they are marked and so consistency of approach and correct mechanics of marking are essential.
5. Rules on positioning of ticks and marks are to aid in checking and remarking of scripts.
6. Do not expect the candidate to use the exact wording given in the mark scheme. If you are in doubt as to the correctness of an answer given by the candidate, consult your Team Leader.

Specific marking guidelines

7. The basic rule is one mark one tick. The tick to be positioned at the point where the mark is gained in the answer and definitely not in the margin.
8. The only figures in the margin should be sub-totals for parts of questions and a final ringed total for a whole question.
9. Where questions are divided into parts a, b and so on, and a mark is indicated for each on the paper, a mark should be positioned at the end of the appropriate response in the margin.
10. There should in effect be a mark in the margin at every point there is one on the question paper and a number of ringed totals, which relates directly to the number of questions on the paper.
11. Where a question has only one part, the total for that question should be written once and then again and circled. This allows for easy checking that totalling and transcription of marks is correct.
12. All zero values should be crossed through.
13. All blank spaces should be crossed through with a vertical line through the text space – not in the margin.
14. All writing must be marked as read, either by the presence of ticks or by striking through the script with a vertical line.
15. All blank pages must be crossed through.
16. Where candidates have added extra to their answers later in the script, the total mark should be indicated as including x from Page y. The total mark should be in the position where the answer starts.
17. The use of the following symbols/marks is acceptable:
 - a. BOD – where the benefit of the doubt is given for the point the candidate is making. This is generally where poor writing or English is an issue. Its widespread use should be avoided.
 - b. Underlining of subject specific terminology, which is misused or incorrect e.g. encoding rather than encryption, information rather than data.
 - c. Underlining can also be used to highlight clearly incorrect statements or the use of a generalised phrase such as quicker, user friendly and so on.

- d. An omission mark ^ should be used where the candidate has given insufficient information to gain a mark. This is particularly useful when a teacher or student looks at scripts against a mark scheme.
- e. It may be appropriate to indicate where the same point has been covered more than once by the use of brackets or an arrow or where a point has been covered in several lines of prose by the use of brackets.
- f. The use of letters associated with ticks **may** be used to indicate different areas being marked in a question, particularly to indicate the different bullet points in an essay. **THIS WILL BE OUTLINED AT STANDARDISATION.**

18. **NO** other symbols or comments should be used.

19. Markers are responsible for checking

- a. The transposition of marks to the front sheet.
- b. That all work has been marked on each script.
- c. That all marks for individual questions are totalled correctly.
- d. That the script total is transferred to the box at the top right of the script.
- e. That they **clearly** initial the script, under the total at the top right, so it is possible for the Principal Examiner to identify each markers work.

Unit 1 Information: Nature, Role and Context

- 1 *Information is said to be of good quality if it is accurate, up-to-date and relevant for a particular use.*

*Using a different example for each one, describe what is meant by each of these **three** characteristics of good quality information.*

6 marks

ONE MARK FOR EXPLAINING/SHOWING UNDERSTANDING OF
WHAT THE CHARACTERISTIC MEANS
ONE MARK FOR ILLUSTRATING THIS WITH AN EXAMPLE

The following are EXAMPLES only

Accuracy - this means that the information on a bank statement must be exactly right to the nearest penny (1) otherwise the account holder can complain/ wrong decisions can be made (1)

Up to Date– If the information is out of date e.g. a list of names and addresses is no use for mail shots if it is five years old.(1)
letters will be sent to wrong addresses (1)

Relevant for a particular use – information intended for a branch manager of a supermarket showing till usage to allow them to allocate staff over a weekly period (1) would not be of use to the Regional manager wanting a view of the efficiency of all branches (1).

3 times (0,1,2) 6 marks

2 *Banks keep records of customers and their bank accounts. Give **one** example for each of the following:*

- (a) *data that are recording facts;* 1 mark
 (b) *data that are the result of a transaction.* 1 mark

One mark for each

Examples should show an understanding of data

a) Looking for names and addresses/bank account details and similar 1 mark

b) Looking for records of the data that occurs as the result of withdrawals/purchases/payments/balance and others – something is happening

NB It is the **data** not just the event that we are awarding marks for. 1 mark

Withdrawal, payment, purchase all BOD marks

3 *Using a different example for each one of the following personal skills, describe why they are important for an IT professional:*

- (a) *written communication skills;* 2 marks
 (b) *listening skills;* 2 marks
 (c) *problem solving skills.* 2 marks

ONE MARK FOR EXPLAINING THE SKILL & ONE MARK FOR USE OF THE SKILL IN AN ICT CONTEXT.

Example answers include:

a) Written communication skills – ability to write documentation both technical and end users (1) e.g. necessary for recording faults clearly and documenting solutions so that they can be understood (1) 2 marks

b) Listening skills –to be able to concentrate fully and ensure a clear idea of the users requirements is obtained (1) so that correct system is designed/ avoid errors in specification (1) 2 marks

c) Problem solving skills – to consider alternatives (1) when working on a help desk and solving users problems with software they are using (1) 2 marks

NB Example must be ICT related in each case.

4 *A company that makes cricket bats intends to set up a website to advertise its range of products, and to take orders on-line.*

- (a) *Describe **two** factors that the company should consider when deciding on a name for its website.* 4 marks
- (b) *Having decided upon a name for the site, describe the next step that the company must take before it can use the name.* 2 marks
- (c) *Describe **two** ways in which the company could use the facilities available on the Internet to encourage visitors to use their site.* 4 marks
- a) One mark for example (FACTOR)** 4 marks

Any two from:

Length/short/”snappy”
Ease of remembering
Initial letter/extension
Appropriate for business/relates to business
No one else has same name/unique

One Mark For Saying Why Need To Consider It;

Any two from:

Easy to type in
Easy to remember
Meaning attached
Names must be unique
Copyright issues
More effective in search engines
And others.....

b) One Mark For What And One Mark For Why 2 marks

Possible answers include:

Check no one else has the same name (1) can't have duplicate domain names/must be unique(1)
Register/buy the domain name (1) so becomes legally the company's/someone else claims it/copyright (1)
And others.....

c) one mark for way and one mark for how it encourages visitors to get to site 4 marks

Possible answers include:

Register with search engines (1) so people can get to site without knowing URL (1)
Place links on other related websites (1) so people can click on link and get to site (1)
Place adverts/popups on other sites etc (1) to encourage people to visit/increase target audience (1)
Use of cookies (1) for targeted marketing (1)
Use of meta tags (1) so people can pick up site from searches (1)
Send emails (1) informing of address/containing link(1)
Function on site for visitors to add email address of friends(1) get more people to know of existence(1)
Use of “cookies” (1) for targeted marketing (1)
And others.....

- 5** *A checkout operator in a supermarket scans the barcodes of items being purchased by customers. The scanner is linked to an Electronic Point of Sale (EPOS) system. The software that is used contains functions to look up the prices and descriptions of the products that are scanned in order to produce an itemised receipt for the customer. The software also produces a daily sales summary report for the store manager.*
- (a) Give **one** item of data that is entered into the EPOS system. 1 mark
- (b) Give **two** items of information that are produced by the EPOS system. 2 marks
- (c) Describe **one** use of the daily sales summary report for the store manager. 2 marks
- a) bar code/numeric code/product code (1) 1 mark
- b) itemised till receipt/total spend for a customer's till receipt (1) and daily sales summary/product out/low stock notification (1)
description of item (1)
cost/price of item (1) 2 marks
- c) Answer must show understanding of principle of knowledge (1)
being used to interpret information (1) to give benefit to company (1)
- Example
- Daily sales summary report can show most popular items/times of purchasing (1) allows manager to organise stock levels/staffing (1)
reducing cost of staffing for company (1) 2 marks
- Any two of three

6 State **one** feature that each of the following items should possess, explaining how it may prevent health and safety problems for someone using a computer:

- | | | |
|-----|---------------------------|----------------|
| (a) | <i>the keyboard;</i> | <i>2 marks</i> |
| (b) | <i>the chair;</i> | <i>2 marks</i> |
| (c) | <i>software packages.</i> | <i>2 marks</i> |

One mark for FEATURE plus one mark for how THAT feature prevents Health and Safety problems
The marks are dependent

- | | | |
|----|--|---------|
| a) | Well-sprung keys/Tiltable/ Curved/shaped ergonomically / wrist rest(1)
to prevent strain on wrists/fingers/RSI (1) | 2 marks |
| b) | Swivel or moveable base/five point base/adjustable height/adjustable back or tilt/lumbar support (1)
to prevent strain on back/neck/ enable correct (NOT just comfortable) posture to be maintained (1) | 2 marks |
| c) | good help/ clear instructions (1)
to prevent confusion leading to stress (1)
good use of colour/avoidance of flashing lights/ Suitable text size (1)
to prevent eye strain (1)
Short cuts (1) reduce RSI (1)
Clear menu structure/organisation (1) reduce stress from frustration of not being able to find things/RSI (1) | 2 marks |
| | NOT easy to use or reliable
Stress must give what causes it | 2 marks |

7 *The use of laptop computers by company employees has increased the threats to ICT systems.*

*Describe **four** threats to ICT systems caused by employees using laptops.* 8 marks

ONE MARK FOR THREAT AND ONE MARK FOR RELATING THIS TO LAPTOP USE

Annotate marks as follows:

T for Threat,

R for Reason connected to laptop

4 times 2,1,0

8 marks

The following are **EXAMPLES** only :

Loss of hardware (T) due to it being the responsibility of the employee to keep laptop secure rather than the company/easier to steal because of size(R)

Loss of data (T) no control on whether employee lets others access machine/fails to make back up copies of data/battery runs out (R)

Corruption of data (T) employee lets others have access to data no record/controls on access on a laptop(R)

Introduction of viruses (T) virus downloaded on to laptop hard drive and then employee uses unchecked disks to transfer viruses to machines at work from laptop(R)

Damage to hardware (T) employee drops machine/keeps in unsuitable environment as no control over this by company(R)

Errors may be made(T) due to lack of support when used remotely (R)

8 *As the use of ICT increases so does the need for legislation to control its use.*

Explain, using an example for each one, what is covered by:

(a) *the Data Protection Act;* 3 marks

(b) *the Computer Misuse Act;* 3 marks

(c) *copyright and licensing agreements.* 3 marks

(a) To protect the individual /individual's rights/privacy/personal data (1)
control what data is stored/passed on/used on individuals (1)
example/expansion (1) 3 marks

(b) To allow unauthorised access to be prosecuted (1)
to discourage/prevent the misuse/modification of data/programs (1)
example/expansion (1) 3 marks

(c) Designed to protect producers of software products/software/ideas (1)
(comes under same copyright laws as literary works)
by controlling number of copies user is allowed to have (1)
example/expansion (1) 3 marks

9 *State one way in which ICT can be used by each of the following organisations, and give a benefit to that organisation of using it. Your examples must be different in each case:*

- | | |
|----------------------------------|----------------|
| <i>(a) the Police;</i> | <i>2 marks</i> |
| <i>(b) a hospital;</i> | <i>2 marks</i> |
| <i>(c) a coach company;</i> | <i>2 marks</i> |
| <i>(d) a publishing company.</i> | <i>2 marks</i> |

For each of a) to d) 8 marks

Four lots of 2,1,0

One mark for example which must be an ICT e.g. Not just “they can store records of criminals”

NB question asks for different examples so not database four times

One mark for benefit to the organisation